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59

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MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			EDELMAN, BRADLEY E	
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			2153	

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/748,849

Applicant(s)

HARADA, YOSHIHISA

Examiner

Bradley Edelman

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This Office action is in response to Applicant's amendments and request for continued examination filed on December 8, 2004. Claims 1-24 are presented for examination.

#### ***Claim Objections***

1. Claims 3, 10, 14, and 21 are objected to because of the following informalities:

In considering claims 3, 10, and 14, the claims describe "comparing an amount of received load... *and* said shaper value" (emphasis added; see lines 5-6 of claims 3 & 10, lines 8-9 of claim 14). This language is somewhat misleading because of the use of the word "and." It appears that the intent of the claim is comparing the amount of received load *to* the shaper value. Examiner suggests that Applicant replace the word "and" with the word "to."

In considering claim 21, the word "dated" on line 5 appears to be a typographical error, and should read "data." Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2153

In considering these claims, both claim 5 and claim 6 mention "said shaper" on lines 1-2. It appears that this phrase should read "said shaper means" because the claims from which claim 5 and 6 depend use the language "shaper means" rather than simply "shaper."

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 7-11, 14, 18-20, and 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Sharma et al. (U.S. Patent No. 6,182,109, hereinafter "Sharma").

In considering claim 1, Sharma discloses a server ("server") comprising:

Processing means ("thread pool") for processing data transferred from plural clients ("clients," col. 23, lines 20-25);

Comparing means for comparing with a designated value ("MaxThreads") an amount of received load corresponding to received data transferred from a plurality of clients (col. 23, lines 32-36, 60-63; col. 24, lines 2-7, "test step" compares the received load to the MaxThreads value); and

Art Unit: 2153

A judging means for judging whether a part of said received data should be discarded prior to receipt of at least a portion of said amount of received load by said processing means of said server (col. 24, lines 16-24, "the client request is rejected" before the request is received by the thread pool);

Wherein said server controls said received load corresponding to said received data transferred from said plural clients based on a judged result of said judging means (col. 24, lines 18-19, "thus the server administers client session admission control to avoid an overload situation").

In considering claim 2, Sharma further discloses that the designated value is set based on a receiving capacity of said processing means of said server (col. 23, lines 32-36; wherein the maximum number of threads allocated corresponds to the "peak load of clients without overloading the server system").

Claim 3 contains no further limitations over claim 1 and is thus rejected for the same reason.

In considering claim 4, Sharma further discloses that the comparing means discards a part of said received data exceeding said received load based on a judged result prior to receipt of said at least portion of said received load by said processing means of said server ("reject the client request," col. 24, lines 16-24).

Art Unit: 2153

Claim 7 contains no further limitations over claim 1 and is thus rejected for the same reason.

Claim 8 is disclosed by Sharma in the same sections described with regard to claim 1, and is thus rejected for the same reason.

In considering claim 9, Sharma further discloses that the designated value is set based on a receiving capacity of said processing unit of said server (col. 23, lines 32-36; wherein the maximum number of threads allocated corresponds to the "peak load of clients without overloading the server system").

Claim 10 is disclosed by Sharma in the same sections described with regard to claim 1, and is thus rejected for the same reason.

Claim 11 is disclosed by Sharma in the same sections described with regard to claim 4, and is thus rejected for the same reason.

In considering claim 14, claim 14 contains no further limitations over claims 10 and 11 combined, and is thus rejected for the same reasons.

Claim 18 contains no further limitations over claim 1 and is thus rejected for the same reason.

Claim 19 contains no further limitations over claim 1 and is thus rejected for the same reason.

In considering claim 20, Sharma discloses a received load control method comprising:

Setting a shaper value ("MaxThreads") corresponding to a data receiving capacity of a processing unit of a server (col. 23, lines 32-33, "maximum number of threads [on a server] reserved to service client requests");

Transmitting said amount of received data to said processing unit if said amount of received data is less than said shaper value (col. 24, lines 3-10, "determine whether the maximum number of threads would be exceeded if the client request were granted" and if not, then assigning the client port to process the received data); and

Transmitting said amount of received data to said processing unit if said amount of received data is not less than said shaper value (col. 24, lines 3-10, "determine whether the maximum number of threads would be exceeded if the client request were granted" and if not - i.e. the amount of received data is equal to, but not less than the shaper value - then assigning the client port to process the received data).

In considering claim 22, Sharma further discloses that the received data comprises a packet (col. 8, lines 41-45, wherein TCP/IP uses packets such that requests will be sent as packets).

In considering claim 23, Sharma further discloses that the designated value is set based on a receiving capacity of said processing means of said server and a predetermined margin of receiving capacity of said processing means of said server (col. 23, lines 20-35, wherein an administrator can set the MaxThreads value at any value, which would include whatever margin he/she pleases in order to ensure that the server system does not become overloaded).

Claim 24 contains no further limitations over claim 1 and is thus rejected for the same reasons.

4. Claims 1-4, 6-11, 13, 14, 16-22, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Cherkasova et al. (U.S. Patent No. 6,360,270, hereinafter "Cherkasova").

In considering claim 1, Cherkasova discloses a server ("server") comprising:

Processing means ("processors or central processing units," col. 3, lines 55-57) for processing data transferred from plural clients ("clients," col. 3, lines 44-45);

Comparing means for comparing with a designated value ("Threshold") an amount of received load corresponding to received data transferred from a plurality of clients (col. 5, lines 51-52, "if the utilization rises above a specified threshold"); and

A judging means for judging whether a part of said received data should be discarded prior to receipt of at least a portion of said amount of received load by said



Art Unit: 2153

processing means of said server (col. 5, lines 52-53, "then for the next time interval, the admission controller 14 will reject all new sessions" in which case the data received corresponding to the new session will not be received by the server processor, but will be rejected prior to such receipt; col. 4, lines 50-55, wherein unaccepted message is in fact discarded from the server: "the deferral manager handles the unaccepted messages 24 which were blocked by the admission controller 14... [and] transfers the deferred messages 30 to another server");

Wherein said server controls said received load corresponding to said received data transferred from said plural clients based on a judged result of said judging means (same cited section, wherein the server controls the admission control).

In considering claim 2, Cherkasova further discloses that the designated value is set based on a receiving capacity of said processing means of said server (col. 8, lines 8-9, "number of new sessions that the server can handle with the remaining resources").

Claim 3 contains no further limitations over claim 1 and is thus rejected for the same reason.

In considering claim 4, Cherkasova further discloses that the comparing means discards a part of said received data exceeding said received load based on a judged result prior to receipt of said at least portion of said received load by said processing means of said server (col. 4, lines 50-55; col. 5, lines 52-53, as discussed above).

In considering claim 6, Cherkasova further discloses that when said shaper judges that the amount of said received load exceeds said shaper value and discards a part of the received data, a part of said received data is discarded from a packet including a low priority by utilizing a QoS based on an order of priority to each of said received data (col. 3, lines 20-25, "quality of service"; and col. 5, lines 9-21, describing that certain message packets, such as new packets, are accepted before others, such as packets relating to existing sessions, thereby establishing packet priority).

Claim 7 contains no further limitations over claim 1 and is thus rejected for the same reason.

Claim 8 is disclosed by Cherkasova in the same sections described with regard to claim 1, and is thus rejected for the same reason.

In considering claim 9, Cherkasova further discloses that the designated value is set based on a receiving capacity of said processing unit of said server (col. 8, lines 8-9, "number of new sessions that the server can handle with the remaining resources").

Claim 10 is disclosed by Cherkasova in the same sections described with regard to claim 1, and is thus rejected for the same reason.

Art Unit: 2153

Claim 11 is disclosed by Cherkasova in the same sections described with regard to claim 4, and is thus rejected for the same reason.

Claim 13 contains no further limitations over claim 6 and is thus rejected for the same reason.

In considering claim 14, claim 14 contains no further limitations over claims 10 and 11 combined, and is thus rejected for the same reasons.

Claim 16 contains no further limitations over claim 6 and is thus rejected for the same reason.

In considering claim 17, Cherkasova further discloses that the shaper and utilization values can be determined by equipment disposed outside of the server (i.e. proxy server, col. 10, line 55 – col. 11, line 11).

Claim 18 contains no further limitations over claim 1 and is thus rejected for the same reason.

Claim 19 contains no further limitations over claim 1 and is thus rejected for the same reason.

Art Unit: 2153

In considering claim 20, Cherkasova discloses a received load control method comprising:

Setting a shaper value ("threshold") corresponding to a data receiving capacity of a processing unit of a server (col. 5, lines 49-53);

Determining whether an amount of received data is less than said shaper value (checking whether "sufficient resources are available in the server 12," col. 5, lines 44-46);

Transmitting said amount of received data to said processing unit if said amount of received data is less than said shaper value ("if the utilization falls below the given threshold, then for the next time interval, the admission controller 14 will admit new sessions again while continuing to service existing sessions," col. 5, lines 54-57); and

Transmitting a part of said amount of said received data to said processing unit if said amount of received data is not less than said shaper value ("if the utilization rises above a specified threshold, then for the next time interval, the admission controller 14 will... service only existing sessions," col. 5, lines 51-54).

In considering claim 21, Cherkasova further discloses outputting the value to a shaper and that the shaper means discards a remaining part of the amount of received data that exceeds the shaper value based on the judged result (col. 5, lines 58-62; col. 4, lines 50-55, wherein unaccepted messages are sent to the deferral manager, and are discarded from the server).

In considering claim 22, Cherkasova further discloses that the received data comprises a data packet (i.e. messages sent across the network are in data packet form).

Claim 24 contains no further limitations over claim 1 and is thus rejected for the same reasons.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma, in view of what was well known in the art at the time the invention was made.

In considering claim 17, Sharma further discloses that the "shaper" value (i.e. maximum number of active threads that should be supported by the server) can be set by a network administrator with a user configuration program (col. 23, lines 23-26). However, Sharma does not disclose that the administrator can set the value from equipment disposed outside of the server. Sharma actually remains silent regarding where the administrator might be located. Nonetheless, Examiner takes official notice that servers can be managed from remote locations. Thus, a person having ordinary skill in the art would have readily recognized the desirability and advantages of allowing

Art Unit: 2153

the administrator in the system taught by Sharma to configure the server from a remote location, so that the administrator can save the travel expenses incurred by being forced to travel to the server in order to configure it. Thus, it would have been obvious to set the shaper value in the system taught by Sharma from equipment outside the server.

6. Claims 5, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma, in view of Fodor et al. (U.S. Patent No. 6,438,104, hereinafter "Fodor").

In considering claim 5, although the system taught by Sharma teaches substantial features of the claimed invention, it does not teach the claimed early packet discard feature. Nonetheless, early packet discard features are well known in load balancing systems, as evidenced by Fodor. Fodor describes a load balancing system for limiting the number of packets received at servers throughout the network, wherein one method used to limit the number of packets is early packet discard (col. 1, line 58 – col. 2, line 8). Given the teaching of Fodor, a person having ordinary skill in the art would have readily recognized the desirability and advantages of using early packet discard for the requests in the system taught by Sharma, to eliminate receipt of unnecessary message packets, thereby saving additional bandwidth at the server. Therefore, it would have been obvious to use early packet discard for the data packets taught by Sharma.

In considering claim 12, claim 12, presents the same limitation as claim 5, and is thus rejected for the same reasons.

In considering claim 15, claim 15 presents a method for performing the same step as described in claim 12, and is thus rejected for the same reasons.

7. Claims 5, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cherkasova, in view of Fodor et al. (U.S. Patent No. 6,438,104, hereinafter "Fodor").

In considering claim 5, although the system taught by Cherkasova teaches substantial features of the claimed invention, it does not teach the claimed early packet discard feature. Nonetheless, early packet discard features are well known in load balancing systems, as evidenced by Fodor. Fodor describes a load balancing system for limiting the number of packets received at servers throughout the network, wherein one method used to limit the number of packets is early packet discard (col. 1, line 58 – col. 2, line 8). Given the teaching of Fodor, a person having ordinary skill in the art would have readily recognized the desirability and advantages of using early packet discard for the requests in the system taught by Cherkasova, to eliminate receipt of unnecessary message packets, thereby saving additional bandwidth at the server. Therefore, it would have been obvious to use early packet discard for the data packets taught by Cherkasova.

In considering claim 12, claim 12, presents the same limitation as claim 5, and is thus rejected for the same reasons.

In considering claim 15, claim 15 presents a method for performing the same step as described in claim 12, and is thus rejected for the same reasons.

### ***Response to Arguments***

In Applicant's response filed on December 8, 2004, the following arguments are noted.

Initial note: Examiner previously made certain comments regarding the word "discarding," stating that Cherkasova does not explicitly describe "discarding" data. After a thorough review of the Cherkasova reference and an in depth review of Applicant's specification – which gives no definition or example of what is meant by the term "discarding" – Examiner now withdraws such assertions. Notably, Cherkasova discloses "discarding" data at least in col. 4, lines 36-59. This passage describes that certain messages are received by the admission controller, but are not accepted to be processed by the processor. These messages can then be sent, via a deferral manager, to *another* web server for processing. Upon such deferral, the messages are necessarily discarded from the initial server. Thus, Cherkasova does in fact disclose the "discarding" feature stated in the claims.

Applicant's arguments are as follows:



Art Unit: 2153

- a. Cherkasova does not disclose the claimed features of comparing the amount of received load corresponding to the received data with a designated value *prior* to the receipt of at least a portion of said amount of received load by said processing unit.
- b. Cherkasova does not disclose or suggest any structure, equivalents thereof, or identity of function necessary for the claimed “means for processing data,” “means for setting a shaper value,” and/or “means for comparing,” as defined in the present application.
- c. Cherkasova does not disclose transmitting the amount of received data to the processing unit if the amount of received data is less than the shaper value, or transmitting a part of the amount of the received data to the processing unit if the amount of received data is not less than the shaper value, as claimed in claim 20.
- d. Cole does not disclose the invention as now claimed in the amended claims.

In considering (a), Applicant contends that Cherkasova does not disclose the claimed features of comparing the amount of received load corresponding to the received data with a designated value *prior* to the receipt of at least a portion of said amount of received load by said processing unit. Examiner respectfully disagrees. Cherkasova discloses exactly the same type of load controlling system as Applicant’s claimed invention.

Notably, Cherkasova discloses a “shaper” (which Cherkasova calls an “admission controller”) that determines if a “processing unit” (which Cherkasova calls a “processor,” see col. 3, lines 54-67) is capable of processing data transmitted by the

Art Unit: 2153

client according to a "shaper value" ("Threshold") associated with the amount of load the processor can handle (see col. 5, lines 41-55). Furthermore, Cherkasova discloses that the data will *not* be sent to the processor if the admission controller determines that the load on the processor is too high, but instead will be discarded from the server (by sending the data elsewhere) *prior* to sending it to the processor (see col. 5, lines 50-55, and col. 4, lines 50-55, wherein "unaccepted messages" never reach the processor, and are thus discarded prior to reaching the processor).

Applicant has further argued that because Cherkasova discloses that some messages are always accepted by the admission controller, while others are sometimes accepted and sometimes rejected, Cherkasova does not disclose the claimed invention. Examiner respectfully disagrees with this argument. Primarily, the claims say nothing about whether certain data is always accepted or whether certain data is not always accepted. The claims merely describe the process that occurs when *some* data happens to be received by the server. Cherkasova discloses the claimed features, primarily in its description regarding the new messages. Thus, Cherkasova anticipates the *claimed* invention as discussed in the claim rejections above.

In considering (b), Applicant contends that Cherkasova does not disclose or suggest any structure, equivalents thereof, or identity of function necessary for the claimed "means for processing data," "means for setting a shaper value," and/or "means for comparing," as defined in the present application. Examiner respectfully disagrees.

As a primary note, regardless of the Cherkasova reference, *Applicant's specification* raises questions regarding whether *it* in fact discloses any structure or equivalents thereof for the "means for setting a shaper value," or "means for comparing." For instance, Applicant's specification defines the "means for setting a shaper value" as a "shaper value setting section" (see p. 7, line 23). This would hardly convey to someone of ordinary skill in the art any physical structure of the claimed "means." Applicant's specification treats the "means for comparing" in a similar manner, stating merely that "the server compares..." (see p. 4, line 23), and "at the shaper 11, the amount of received data (total received load) is compared... (see p. 10, lines 28-29). Note: Applicant's specification also fails to define the term "shaper."

In contrast to Applicant's specification, Cherkasova explicitly defines the "means for setting a shaper value," as the "admission controller" and the "means for comparing," as the "resource monitor." Cherkasova further defines the "means for processing" as "one or more processors or central processing units"). See col. 3, lines 54-65. Thus, Cherkasova discloses the claimed invention as discussed in the claim rejections above.

In considering (c), Applicant contends that Cherkasova does not disclose transmitting the amount of received data to the processing unit if the amount of received data is less than the shaper value, or transmitting a part of the amount of the received data to the processing unit if the amount of received data is not less than the shaper value, as claimed in claim 20. Examiner respectfully disagrees.

Art Unit: 2153

First, note that the claim does not use the term "or" but uses the term "and."

Second, Cherkasova does disclose the steps of transmitting the amount of received data to the processing unit if the amount of received data is less than the shaper value (i.e. if the amount is less than the Threshold load value, a request for an existing session will be transmitted to the processor), and transmitting a part of the amount of the received data to the processing unit if the amount of received data is not less than the shaper value (a request for an existing session will also be sent if the amount of received data is above the threshold value). Thus, Cherkasova discloses the claimed invention as discussed in the claim rejections above.

In considering (d), Examiner has withdrawn the rejections in view of Cole.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is 571-272-3953. The examiner can normally be reached from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached at 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2153

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "Bradley Eddleman". The signature is written in a cursive style with a horizontal line underlining the name.

BE

March 2, 2005